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PAPER

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**BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES**

Application Number: 10/656,392
Filing Date: September 05, 2003
Appellant(s): HEMINWAY ET AL.

MAILED
JUL 06 2007
GROUP 1700

Kenneth N. Nigon (31,549)
For Appellant

EXAMINER'S ANSWER

This is in response to the appeal brief filed April 13, 2007 appealing from the Office action mailed December 21, 2006.

(1) Real Party in Interest

A statement identifying by name the real party in interest is contained in the brief.

(2) Related Appeals and Interferences

The examiner is not aware of any related appeals, interferences, or judicial proceedings which will directly affect or be directly affected by or have a bearing on the Board's decision in the pending appeal.

(3) Status of Claims

The statement of the status of claims contained in the brief is correct.

(4) Status of Amendments After Final

The appellant's statement of the status of amendments after final rejection contained in the brief is correct.

(5) Summary of Claimed Subject Matter

The summary of claimed subject matter contained in the brief is correct.

(6) Grounds of Rejection to be Reviewed on Appeal

The appellant's statement of the grounds of rejection to be reviewed on appeal is correct.

(7) Claims Appendix

The copy of the appealed claims contained in the Appendix to the brief is correct.

(8) Evidence Relied Upon

| | | |
|-----------|--------------------|---------|
| 4,984,866 | BOISGONTIER et al. | 1-1991 |
| 4,702,547 | ENOCHS | 10-1987 |

(9) Grounds of Rejection

The following ground(s) of rejection are applicable to the appealed claims:

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-6 are rejected under 35 U.S.C. 102(b) as being anticipated by
Boisgontier et al. (US 4,984,866).

Boisgontier et al. teach a solder preform for attaching an optical fiber having a diameter to a fiber attach pad, the solder preform comprising a body including solder at least on a bottom surface thereof, the body having a groove extending along a first face from a first end to a second, the groove being larger in size than the optical fiber to allow alignment of the optical fiber within the groove such that the solder perform is

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configured to permit alignment of the optical fiber in first and second directions when groove of the solder perform is placed over the optical fiber (column 12, lines 16-21 and Figures); the body having a length defined as a distance between the first end and the second end a height defined as a distance between the bottom surface and the top surface opposite the bottom surface and a width defined as a distance between the third end and a fourth end opposite the third surface (col. 12, ll. 16-41); the height of the groove is larger than the diameter of the optical fiber, allowing a range of clearance above and below the optical fiber (column 12, lines 16-21 and Figures); the width of the groove is larger than the diameter of the optical fiber, allowing a range of clearance on at least a side of the optical fiber (column 12, lines 16-21 and Figures); the body is formed as a geometric solid with at least one substantially flat face; and the geometric solid is selected from a group consisting of a rectangular box, a cubical box, a cylinder, a semi-cylinder, a semi-sphere, a pyramid, and a cone (column 12, lines 16-21 and Figures); the body is formed from a metallic material "solder" (column 12, lines 16-21 and Figures); where the groove is larger than 125 micron (col. 5, ll. 13-15), where the groove has a height in the claimed range (Figure 8, item 70).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claim 7 is rejected under 35 U.S.C. 103(a) as being unpatentable over Boisgontier et al. as applied to claim 1 above, and further in view of Enochs (4,702,547). Boisgontier et al. teach all of the limitations of the claims except that the body is formed from a glass material. Enochs teaches the body is formed from a glass "silicon" material (Summary of Invention and column 4, line 56-column 5, line 30). The gold layer formed on the surface of the silicon retaining member constitutes the solder of claim 1. It is obvious to one of ordinary skill in the art that the solder could have been adhered to either the pad or the retaining member since both surfaces are relative to each other. At the time of the invention it would have been obvious to one of ordinary skill in the art to combine the silicon member of Enochs with the solder member of Boisgontier et al. in order to form a retaining member that maintains its shape during the soldering process.

(10) Response to Argument

Appellant argues that the examiner's interpretation of height and width (particularly that discussed within the diagram as illustrated in the Appeal Brief on page 5) are contrary to the explicit definition in Appellant's Figure (Figure 3C) (Appeal Brief, pages 4-5). While the examiner understands the Appellant's arguments regarding the differences between the examiner's interpretation of the claim language and Figure 3C as illustrated in Appellant's specification, the examiner reminds the appellant that during patent examination, the pending claims must be "given the broadest reasonable interpretation." Appellant always has the opportunity to amend the claims during

prosecution, and broad interpretation by the examiner reduces the possibility that the claim, once issued, will be interpreted more broadly than is justified. In re Prater, 415 F.2d 1393, 1404-05, 162 USPQ 541, 550-51 (CCPA 1969). The examiner has provided a reasonable and justified interpretation of the instant broadly written claim limitations. More importantly, Appellant's specification broadly discloses an "exemplary embodiment" of Figure 2 illustrated in Figures 3A-D (see Appellant's written specification, page 5, paragraph 30). Therefore, Appellant has merely disclosed that only one embodiment of the invention, and not every embodiment encompassed by the claimed invention, is defined by the specific definitions discussed in paragraph 30 (i.e. "solder perform 200 with body 201 having a height H, groove height GH, width W, groove width GW, and length L"). Also, the mere definition of each dimension via the illustration of Figure 3C does not necessarily include positional information as to sufficiently limit the height and width to only that as defined by conventional definitions. In other words, the position of the solder perform for bonding purposes (at an angle, on a horizontal axis, on a longitudinal axis, etc.) is not disclosed, suggested, or claimed in order to justify the Appellant's arguments. It is unclear from the Appellant's disclosure and claimed limitations (based on the overall invention and not only the "exemplary embodiment" of Figure 3C argued by the Appellant) the relationships between the discussed dimensions and the orientation of the solder perform. The solder perform disclosed and claimed is interpreted to encompass many different orientations in space, and conventional definitions of height and width as argued by the appellant would not necessarily encompass the particular embodiment shown in Figure 3C.

Appellant also argues that the groove height and groove width must be interpreted as defined by the subject disclosure, even though the appellant amended the claims to define the height and width in terms of the solder perform (Appeal Brief, page 6). The examiner disagrees and once again reminds the appellant that the groove height and groove width have only been defined for specific "exemplary embodiments" of the invention and not necessarily for the invention as a whole. Thus, any broadest reasonable interpretation of the instant claim language is justified and relevant to the overall invention. Appellant has made no disclosure or even suggestion that the embodiment of Figure 3C (as argued) is the only embodiment encompassed by the invention, therefore, suggesting that there are indeed other "exemplary" embodiments of the invention not explicitly disclosed within the written specification. The examiner maintains that Boisgontier et al. discloses and/or suggests a broadest reasonable interpretation of the claim language based on the invention as a whole and not merely with regard to the single embodiment of Figure 3C as argued.

The appellant then argues that the examiner has failed to "properly" interpret the terms "height" and "width" according to a broadest reasonable interpretation consistent with the definition in the subject disclosure; and, that the Examiner ignores the definition of height and width as explicitly disclosed in Appellant's Figure by asserting that there is no statement in the specification providing definition of the terms (Appeal Brief, page 6). The examiner disagrees and maintains that the broadest reasonable interpretation of "height" and "width" as interpreted by the Examiner during examination are "proper" for the reasons discussed above. Moreover, the examiner has not ignored the definition of

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height and width as defined by the Figure (specifically Figure 3C, which Appellant continually argues), and the examiner once again reminds the Appellant that the definition of these dimensions defined by the Figure are merely one "exemplary" embodiment of the invention and not the invention as a whole. The claims are interpreted based on the broadest reasonable interpretation of the invention as a whole and not solely with respect to one particular embodiment of the invention. Furthermore, Appellant has not explicitly defined the dimensions "height" and "width" with regard to the entire invention (including all embodiments), nor has the appellant pointed out any clear definitions or suggestions within the disclosure in order to overcome the examiners valid point that there is no statement in the specification providing a definition of the terms. Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993). Hence, the "exemplary embodiment" of Figure 3C which Appellant continually argues provides a clear definition of "height" and "width" are not read into the claims as that they do not particularly pertain to the invention as a whole and do not define the "height" and "width" for every embodiment encompassed by the broadest reasonable interpretation of the invention. The examiner maintains the position that "height" and "width" can be reasonably and broadly interpreted as illustrated by the examiner and argued by the Appellant on Appeal Brief page 5.

Appellant argues that Enochs does not supply the deficiencies of Boisgontier et al. and renders Boisgontier et al. and Enochs inadequate as a basis for the Examiner's

obviousness rejection of claim 7 (Appeal Brief, page 7). The examiner disagrees for all of the same reasons discussed above with regard to the anticipatory rejection over Boisgontier et al.

Appellant argues that each feature of claims 1-6 is not taught or suggested by Boisgontier et al. and, therefore, cannot be anticipated by Boisgontier et al. as instantly rejected (Appeal Brief, page 8). The examiner disagrees and points the appellant to the rejection of record addressing each limitation of the claims, and more particularly to the discussion above regarding the appellant's main argument against the alleged explicit definitions of "height" and "width." Appellant also argues that claim 7 is not obvious over Boisgontier et al. and Enochs because claim 7 includes all of the features of claim 1, which Appellant does not believe is anticipated by Boisgontier et al (Appeal Brief, pages 9 and 15). The examiner disagrees for the same reasons discussed in regard to claim 1. Moreover, the examiner notes that there is sufficient suggestion and motivation to combine the references of record in order to arrive at the claimed limitations of claim 7. Particularly, the references of record must be within the same field of endeavor, or, if not, then reasonably pertinent to the problem with which each reference is trying to solve, in order to provide sufficient suggestion for combining the two references. In this case, both Boisgontier et al. and Enochs are related to the same field of endeavor for forming optical fiber packages via an attachment/coupling device (see abstracts of each patent). In response to Appellant's argument that there is no suggestion to combine the references, the examiner recognizes that obviousness can only be established by combining or modifying the teachings of the prior art to produce the claimed invention

where there is some teaching, suggestion, or motivation to do so found either in the references themselves or in the knowledge generally available to one of ordinary skill in the art. See *In re Fine*, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988) and *In re Jones*, 958 F.2d 347, 21 USPQ2d 1941 (Fed. Cir. 1992). In this case, it would have been obvious to one of ordinary skill in the art at the time of the invention to combine the silicon member of Enochs with the solder member of Boisgontier et al. in order to form a retaining member that maintains its shape during the soldering process.

Appellant argues that Boisgontier et al. shows a height of a groove of a preformed bridge strip of solder (70) that is less than its width but does not disclose that or suggest that a height of the groove is greater than its width, such that the ratio of the height dimension to the width dimension is about 1.1:1 or greater (Appeal Brief, page 10). First, the examiner notes that the appellant does not explicitly claim that the "height of the groove is greater than its width" and the claimed ratio, although claiming a height greater than width (1.1:1 to 1.9:1), claims "about 1.1:1" and "about 1.9:1." The mere limitation of "about" leads one of ordinary skill in the art to a reasonable interpretation broadly encompassing a range of values on either side of the claimed ratio. Therefore, it is not necessarily implied or even suggested by the claim limitation as it is instantly broadly written, that the ratio of height to width must absolutely have a greater height of the groove than the groove width. For example, it is certainly reasonable for the examiner to interpret "about 1.1:1" to be 1:1 or any other reasonably close range of variables, as that it has not previously been claimed or even suggested that the height must always be greater than the width. Second, the examiner maintains the

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interpretation of Boisgontier et al. as shown in the Appeal Brief on page 5. There is no claim or suggestion as to the relationship in space of the width and height of the solder perform. Also, as previously discussed, Appellant argues only one specific "exemplary embodiment" of the invention with regard to the claimed height and width. The invention overall does not clearly define the height and width of the solder perform; therefore the examiner's broadest reasonable interpretation is clearly encompassed by the prior art of record as discussed above. Lastly, the appellant is merely claiming the solder perform limitations in order to arrive at a resultant structure for attaching a optical fiber having a diameter to a fiber attach pad. Boisgontier et al. also discloses a perform in order to achieve an optical fiber package. Thus, regardless of the height and width of the groove in Boisgontier et al., the disclosed invention therein clearly anticipates the same result as achieved by the appellant's claim. Or, if the appellant disagrees, the appellant has provided no unexpected results or evidence proving that the resultant structure would be significantly different than that of Boisgontier et al. due to the claimed differences in the groove height to width ratio.

Appellant continues to argue the examiner's interpretation of height and width with regard to the definitions within the appellant's specification (Appeal Brief, pages 11-14). The examiner disagrees with the Appellant's arguments for all of the same reasons discussed above.

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(11) Related Proceeding(s) Appendix

No decision rendered by a court or the Board is identified by the examiner in the Related Appeals and Interferences section of this examiner's answer.

For the above reasons, it is believed that the rejections should be sustained.

Respectfully submitted,

/Rachel E. Beveridge/

Rachel E. Beveridge
Examiner, Art Unit 1725

/reb/
2 July 2007

Conferees:

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